

IN THE CLAIMS

The current status of the claims is reflected in the below listing of claims.

1. (Currently Amended) A composition for use as a catalyst in oxidation or reduction reactions, the composition comprising electrocatalyst alloy particles comprising an alloy of platinum and copper, wherein (i) the concentration of platinum in the electrocatalyst alloy particles is greater than 50 atomic percent and less than about 80 atomic percent, and (ii) the composition has the electrocatalyst alloy particles have an average particle size which is less than 25 angstroms (Å).

2. (Currently Amended) The composition of claim 1 wherein the sum of the concentrations of platinum and copper therein in the electrocatalyst alloy particles is greater than about 95 atomic percent.

3. - 4. (Canceled)

5. (Currently Amended) The composition of claim 1 wherein the composition has the electrocatalyst alloy particles have an average particle size which is less than about 20 angstroms.

6. (Currently Amended) The composition of claim 1 wherein the composition has the electrocatalyst alloy particles have an average particle size which is less than 15 angstroms.

7. (Currently Amended) The composition of claim 1 wherein the concentration of platinum in the electrocatalyst alloy

particles is greater than about 60 atomic percent and less than about 80 atomic percent.

8. (Currently Amended) The composition of claim 1 wherein the concentration of platinum in the electrocatalyst alloy particles is greater than about 65 atomic percent and less than about 75 atomic percent.

9. (Previously Presented) A supported electrocatalyst powder for use in electrochemical reactor devices, the supported electrocatalyst powder comprising the composition of claim 1 on electrically conductive supports.

10. - 71. (Canceled)

72. - 73. (Canceled)

74. (Currently Amended) The composition of claim 2 wherein ~~the composition has~~ the electrocatalyst alloy particles have an average particle which is less than about 20 angstroms.

75. (Currently Amended) The composition of claim 2 wherein ~~the composition has~~ the electrocatalyst alloy particles have an average particle size which is less than 15 angstroms.

76. (Currently Amended) The composition of claim 2 wherein the concentration of platinum in the electrocatalyst alloy particles is greater than about 60 atomic percent and less than about 80 atomic percent.

77. (Currently Amended) The composition of claim 2 wherein the concentration of platinum in the electrocatalyst alloy particles is greater than about 65 atomic percent and less than about 75 atomic percent.

78. (Previously Presented) A supported electrocatalyst powder for use in electrochemical reactor devices, the supported electrocatalyst powder comprising the composition of claim 2 on electrically conductive supports.

79. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 75 percent of the particles are within about 75 to about 125 percent of the average particle size.

80. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 80 percent of the particles are within about 75 to about 125 percent of the average particle size.

81. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 85 percent of the particles are within about 75 to about 125 percent of the average particle size.

82. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 90 percent of the particles are within about 75 to about 125 percent of the average particle size.

83. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 75 percent of the particles are within about 90 to about 110 percent of the average particle size.

84. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 80 percent of the particles are within about 90 to about 110 percent of the average particle size.

85. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 85 percent of the particles are within about 90 to about 110 percent of the average particle size.

86. (New) The composition of claim 1 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 90 percent of the particles are within about 90 to about 110 percent of the average particle size.

87. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 75 percent of the particles are within about 75 to about 125 percent of the average particle size.

88. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 80 percent of the particles are within about 75 to about 125 percent of the average particle size.

89. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 85 percent of the particles are within about 75 to about 125 percent of the average particle size.

90. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 90 percent of the particles are within about 75 to about 125 percent of the average particle size.

91. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 75 percent of the particles are within about 90 to about 110 percent of the average particle size.

92. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 80 percent of the particles are within about 90 to about 110 percent of the average particle size.

93. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 85 percent of the particles are within about 90 to about 110 percent of the average particle size.

94. (New) The composition of claim 2 wherein a particle size distribution of the electrocatalyst alloy particles is such that at least 90 percent of the particles are within about 90 to about 110 percent of the average particle size.